UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,833	01/14/2004	Shunpei Yamazaki	0756-7247	2372

31780 7590 06/29/2005

ERIC ROBINSON
PMB 955
21010 SOUTHBANK ST.
POTOMAC FALLS, VA 20165

EXAMINER	
CHIEN, LUCY P	

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/756,833	YAMAZAKI ET AL.	
	Examiner	Art Unit	
	Lucy P. Chien	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ~~6/6/2005~~. 2/28/05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities:

Line 6 discloses, "a semiconductor device formed on the insulating film".

Claim 2 line 17 discloses, "an insulating film formed on the resin".

Applicant seems to have left out where the insulating film is located in claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1,3,7,11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al (US 2002/0085143).

Kim et al discloses in figure 2 a first plastic substrate (207) a light emitting device (204b) formed over the first substrate (207) a resin (204a) covering the light emitting device (204b) a insulating film (202) formed on the resin (204a) a semiconductor device (208) formed on the insulating film (202) a liquid crystal cell (211) electrically connected to the semiconductor device (208) and a second substrate (201b) wherein the semiconductor device (208) and the liquid crystal cell (211) are formed between the first substrate (207) and the second plastic substrate (201b).

Regarding *Claim 3,* in addition to Kim et al disclosed above, Kim et al also discloses an additional metal film (203) on the first substrate (207).

Regarding Claim *7 and 11*, in addition to Kim et al disclosed above, Kim et al also discloses (Page 4, Claim 31) that the light-emitting device is a light emitting diode.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 2,4,5,9,13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 2002/0085143) in view of Yamamoto et al (US 6891334).

Regarding *Claim 2 and 4,* Kim et al does not disclose the use of a concave portion of the first plastic substrate.

Yamamoto et al discloses in Figure 3 a light-emitting device (20) formed in the concave portion (11g) of the first plastic substrate (11). A resin (12) formed to cover the light-emitting device (20). A metal film (11m) formed over the concave portion. The light source device is formed in the concave portions so it can be made thinner. (Column 1,Row 50-55).

It would have been obvious to one of ordinary skill in the art, at the time of the invention to combine the teaching of Kim et al's display and Yamamoto et al's concave portion which allows the light source device to be formed thinner. (Column 1,Row 50-55).

Regarding *Claim 5*, Kim et al and Yamamoto et al as disclosed above in addition to Yamamoto teaches sandblasting the metal film (11a) (column 3,row 55-60).

Regarding *Claim 9,13* in addition to Kim et al disclosed above, Kim et al also discloses (Page 4, Claim 31) that the light-emitting device is a light emitting diode

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 2002/0085143) in view of Yokoyama et al (US 20020041348).

Kim et al does not disclose the use of a transparent liquid crystal.

Yokoyama et al in the abstract discloses the use of a transparent liquid crystal cell that controls passage of light emitted from the surface (see abstract).

It would have been obvious to one of ordinary skill in the art, at the time of the invention to combine the teaching of Kim et al's display to include Yokoyama et al's transparent liquid crystal to control passages of the light emitted from the surface of the display (see abstract).

Claim 8,12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 2002/0085143) in view of Weindorf et al (US 20020130985).

Kim et al does not disclose the use of a flexible printed wiring board.

Weindorf et al discloses (Page 3, [0033]) using a flexible printed wiring board connected to the i-emitting diode that is supplied with current to eliminate the need for daughter boards or other LED's which are more expensive.

It would have been obvious to one of ordinary skill in the art, at the time of the invention to combine the teaching of Kim et al's display and Weindorf's flexible printed wiring board to eliminate the need for daughter boards or other interconnecting devices or the more expensive side-lighting LEDs also to provide the display with flexibility (Page 3, [0033]).

Claim 10,14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 2002/0085143) and of Yamamoto et al (US 6891334) in view of Weindorf et al (US 20020130985).

Kim et al and Yamamoto do not disclose the use of a flexible printed wiring board.

Weindorf et al discloses (Page 3, [0033]) using a flexible printed wiring board connected to the i-emitting diode that is supplied with current to eliminate the need for other boards or expensive LED's.

It would have been obvious to one of ordinary skill in the art, at the time of the invention to combine the teaching of Kim et al's display and Yamamoto et al's concave portion to include Weindorf's flexible printed wiring board to eliminate the need for daughter boards or other interconnecting devices or the more expensive side-lighting LEDs also to provide the display with flexibility.

Claim 15,17,18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 2002/0085143) in view of Chaudhari et al (US 6331381).

Kim et al does not disclose the liquid crystal displays used in a cellular phone, wrist watch, and personal computer.

Chaudhari et al discloses (Column 1, Row 13-16) the use of LCD's in a cellular phone, wrist watch, and personal computers to provide a displaying image in the products.

It would have been obvious to one of ordinary skill in the art, at the time of the invention to combine the teaching of Kim et al's display to include Chaudhari et al's liquid crystal displays in a cellular phone, wrist watch, and personal computers with a display that is light and thin such as an LCD.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 2002/0085143) in view of Kawagoe et al (US 5781263).

Kim et al does not disclose the liquid crystal displays used in an electronic book.

Kawagoe et al discloses (Column Row) the use of a LCD in an electronic book.

It would have been obvious to one of ordinary skill in the art, at the time of the invention to combine the teaching of Kim et al's display to include Kawagoe et al's liquid crystal displays in an electronic book to provide it with a display that is light and thin such as an LCD.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 2002/0085143) in view of Washizuka et al (US 4202607).

Kim et al does not disclose the liquid crystal displays used in a front glass.

Washizuka et al discloses (Abstract) the use of an LCD in a front glass such as a mirror or window.

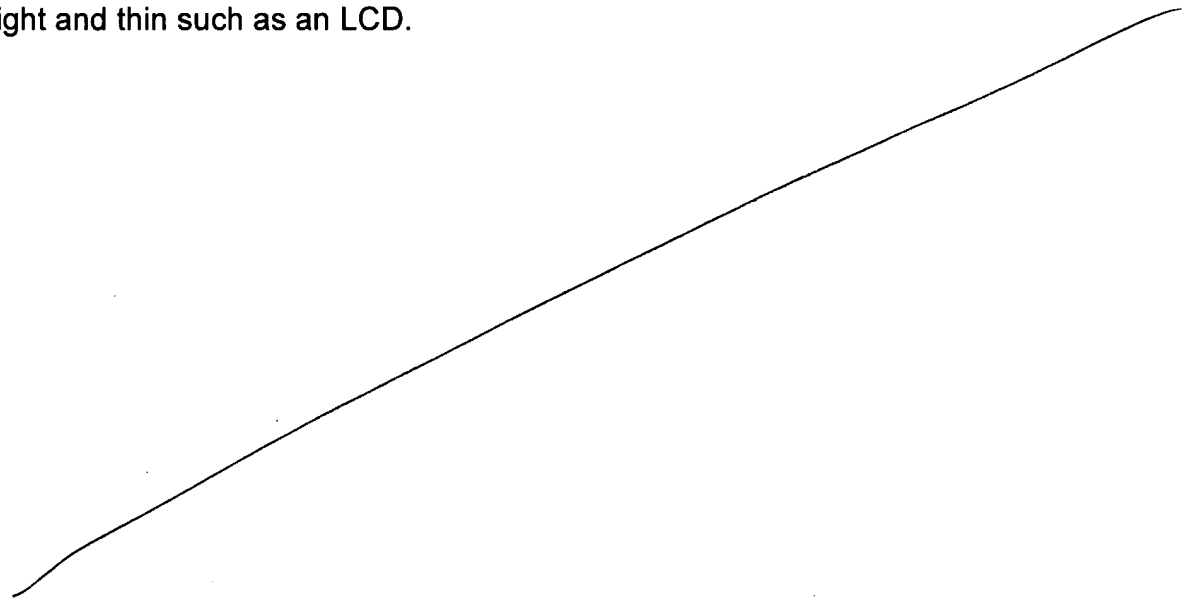
It would have been obvious to one of ordinary skill in the art, at the time of the invention to combine the teaching of Kim et al's display to include Washizuka et al's liquid crystal displays in a front glass to provide the front glass with a display that is light and thin such as an LCD.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 2002/0085143) in view of Boutaleb et al (US 4536014).

Kim et al does not disclose the liquid crystal displays used in an electronic card.

Boutaleb et al discloses (Column 4, Row 13-24) the use of a LCD in a credit card.

It would have been obvious to one of ordinary skill in the art, at the time of the invention to combine the teaching of Kim et al's display to include Boutaleb et al's liquid crystal displays in an electronic card to provide the electronic card with a display that is light and thin such as an LCD.



Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy P. Chien whose telephone number is 571-272-8579. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lucy Chien
Examiner
Art Unit 2871

DUNG T. NGUYEN
PRIMARY EXAMINER

LC